

This Class 525 is considered to be an integral part of Class 520 (see the Class 520 schedule for the position of this Class in schedule hierarchy). This Class retains all pertinent definitions and class lines of Class 520

- SYNTHETIC RESINS (CLASS 520, SUBCLASS 1)**
- 7 .ETHYLENICALLY UNSATURATED  
REACTANT ADMIXED WITH A  
PREFORMED REACTION PRODUCT  
DERIVED FROM: (a) AT LEAST ONE  
POLYCARBOXYLIC ACID, ESTER, OR  
ANHYDRIDE; (b) AT LEAST ONE  
POLYHYDROXY COMPOUND; AND (c)  
AT LEAST ONE FATTY ACID  
GLYCEROL ESTER, OR A FATTY  
ACID OR SALT DERIVED FROM A  
NATURALLY OCCURRING GLYCERIDE,  
TALL OIL, OR A TALL OIL FATTY  
ACID
- 7.1 ..Mixed in the presence of a  
specified material
- 7.2 ..Mixed with silicon-containing  
reactant or polymer derived  
therefrom
- 7.3 ..Mixed with aldehyde or  
derivative as reactant or  
polymer derived therefrom
- 7.4 ..Mixed with previously formed  
solid polymer or SPFI
- 8 .ETHYLENICALLY UNSATURATED  
REACTANT ADMIXED WITH A  
PREFORMED REACTION PRODUCT  
DERIVED FROM: (a) AT LEAST ONE  
POLYCARBOXYLIC ACID, ESTER, OR  
ANHYDRIDE; (b) AT LEAST ONE  
POLYHYDROXY COMPOUND; AND (c)  
AT LEAST ONE NATURAL RESIN,  
PROTEIN, OR BIOLOGICALLY  
ACTIVE POLYPEPTIDE, OR  
CARBOHYDRATE OR DERIVATIVE

- 10 .ETHYLENICALLY UNSATURATED  
REACTANT ADMIXED WITH EITHER  
(A) A POLYMER DERIVED FROM A  
SATURATED DI- OR HIGHER ESTER  
OF A POLYCARBOXYLIC ACID AS  
SOLE REACTANT, OR (B) REACTION  
PRODUCT OF ONLY POLYCARBOXYLIC  
ACIDS OR ANHYDRIDES WITH ONLY  
COMPOUNDS HAVING AT LEAST TWO  
HYDROXYL GROUPS AT LEAST ONE  
OF WHICH IS SATURATED AND  
WHEREIN THE REACTION PRODUCT  
FORMED IS NOT AFTERTREATED  
PRIOR TO ADMIXTURE WITH THE  
UNSATURATED REACTANT EXCEPT  
WITH A POLYCARBOXYLIC ACID,  
POLYCARBOXYLIC ACID ANHYDRIDE,  
OR A POLYOL, AND WHEREIN NO  
SOLID POLYMER DERIVED FROM  
ETHYLENIC REACTANTS ONLY IS  
MIXED THEREWITH
- 11 ..Mixed in presence of specified  
material or a polymerizable  
composition contains a  
specified material
- 12 ...Specified material contains  
boron or silicon atom
- 13 ...Specified material contains  
metal atom other than from  
group IA metal atom (Li, Na,  
K, Rb, Cs, Fr)
- 14 ....Material contains Group IB  
metal atom (Cu, Ag, Au)
- 15 ....Material contains Group IIB  
metal atom (Zn, Cd, Hg) or  
IIIA metal atom (Al, Ga, In,  
Tl)
- 16 ....Material contains Group VB  
metal atom (V, Nb, Ta)
- 17 ....Material contains Group VIII  
metal atom (Fe, Co, Ni, Ru,  
Rh, Pd, Os, Ir, Pt)
- 18 ....Material contains Group IVA  
metal atom (Ge, Sn, Pb)
- 19 ....Material contains Group IIA  
metal atom (Be, Mg, Ca, Sr,  
Ba, Ra)
- 20 ...Specified material contains  
phosphorus atom
- 21 ...Specified material contains  
ketone group
- 22 ...Specified material contains an  
aldehyde or derivative thereof
- 23 ...Specified material contains  
sulfur atom

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| 24   | ....Sulfur is part of heterocyclic ring  | 33 | ..Polymer derived from polycarboxylic acid and polyhydroxy compound is derived from at least one polycarboxylic acid containing at least three carboxyl groups or more than one anhydride group      |
| 25   | ...Specified material contains nitrogen atom   |    |  |
| 26   | ....Nitrogen is part of heterocyclic ring  |    |  |
| 27   | ...Specified material contains a peroxy group, i.e., -O-O-   | 34 | ..Polymer derived from polyhydroxy reactant and polycarboxylic acid is derived from at least one reactant containing at least three hydroxyl groups  |
| 28   | ..Mixed with -N=C=X reactant or polymer derived therefrom (X is chalcogen)   | 35 | ..Polymer derived from polycarboxylic acid or anhydride and polyhydroxy compound is derived from at least two polycarboxylic acid reactants or two polycarboxylic acid anhydrides or mixture thereof |
| 29   | ..Mixed with silicon-containing reactant or polymer derived therefrom  | 36 | ...At least one of said polycarboxylic acid reactants or anhydrides contains ethylenic unsaturation  |
| 30   | ..Mixed with a solid polymer or specified intermediate condensation product derived from at least one amine-, N-C(=X)- or N-S-(=O)- containing reactant and at least one aldehyde or aldehyde-type reactant (X is chalcogen)   | 37 | ....Polymer mixed with unsaturated reactant containing phosphorus atom   |
| 31   | ..Mixed with an 1,2-epoxy compound containing more than one 1,2-epoxy group per mole or polymer derived therefrom  | 38 | ....Polymer mixed with unsaturated reactant containing nitrogen atom   |
| 32   | ..Mixed with a phenolic reactant and an aldehyde or aldehyde-type reactant or reaction product thereof   | 39 | ....Polymer mixed with unsaturated reactant containing carboxylic acid, ester, salt or anhydride group   |
| 32.1 | ..Polymer derived from polycarboxylic acid and polyhydroxyl compound is derived from at least one polycarboxylic acid reactant which is a dimer or trimer of an ethylenically unsaturated aliphatic monocarboxylic acid having at least ten carbon atoms; or adducts of said unsaturated monocarboxylic acid with an alpha, beta ethylenically unsaturated carboxylic acid or derivative | 40 | ....Polymer mixed with unsaturated reactant containing aryl ring   |
| 32.2 | ..Ethylenic reactant or polymer derived from polycarboxylic acid or anhydride and polyol is derived from a carbohydrate or derivative  | 41 | ..Polymer derived from polycarboxylic acid or anhydride and polyhydroxy compound is derived from at least two polyhydroxy compounds  |
|      |  | 42 | ..Polymer derived from polycarboxylic acid or anhydride and polyhydroxy compound is derived from polyhydroxy compound containing ether linkage   |

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| 43    | ..Polymer derived from polycarboxylic acid or anhydride and polyhydroxy compound wherein at least one of the reactants contains ethylenic unsaturation  | 54.2  | ..Previously formed solid polymer chemically reacted with carbohydrate or derivative   |
| 44    | ...Polymer mixed with unsaturated reactant containing two or more unsaturated groups  | 54.21 | ...Cellulose or derivative as chemical reactant  |
| 45    | ....Wherein unsaturated reactant contains three nitrogen atoms in the same ring   | 54.22 | ....Previously formed solid polymer is derived from $N=C=X$ reactant or contains $N=C=X$ group wherein X is chalcogen  |
| 46    | ...Polymer mixed with unsaturated reactant containing nitrogen atom   | 54.23 | ....Previously formed solid polymer is derived from ethylenically unsaturated reactants only   |
| 47    | ....Unsaturated reactant contains nitrogen heterocycle  | 54.24 | ...Starch, starch flour or meal, or derivative as chemical reactant  |
| 48    | ...Polymer mixed with unsaturated carboxylic acid, ester, salt, or anhydride  | 54.26 | ....Previously formed solid polymer derived from ethylenic reactants only  |
| 49    | ...Polymer mixed with unsaturated aromatic compound   | 54.3  | ..Previously formed solid polymer containing chemically combined carbohydrate admixed with a chemical treating or ethylenic agent, SPFI, SICP, or solid polymer                    |
| 50    | .MIXING OF TWO OR MORE SOLID POLYMERS; MIXING OF SOLID POLYMER OR SICP WITH SICP OR SPFI; MIXING OF SICP WITH AN ETHYLENIC AGENT; MIXING OF SOLID POLYMER WITH A CHEMICAL TREATING OR ETHYLENIC AGENT; OR PROCESSES OF FORMING OR REACTING; OR THE RESULTANT PRODUCT OF ANY OF THE ABOVE OPERATIONS | 54.31 | ...Carbohydrate containing polymer is derived from starch, or starch containing flour or meal  |
| 51    | ..Effecting a change in a process in response to a measurement or test  | 54.32 | ....Carbohydrate containing polymer derived from acrylonitrile   |
| 52    | ..Utilizing a tubular or loop reactor   | 54.4  | ..Containing chemically combined natural resin or derivative thereof other than tall oil   |
| 53    | ..Utilizing an apparatus with two or more physically distinct zones   | 54.41 | ...Shellac   |
| 54    | ..Removing and recycling material from one zone to another  | 54.42 | ...Previously formed solid polymer chemically reacted with natural resin or derivative   |
| 54.1  | ..Containing chemically combined protein or biologically active polypeptide   | 54.44 | ....At least one previously formed solid polymer derived from ethylenic monomers only  |
| 54.11 | ...Solid polymer treated by stepwise reaction with naturally occurring alpha or beta amino acid or a material which contains a residue of said amino acid, e.g., a functionally protected amino acid, etc.  | 54.45 | ...Previously formed solid polymer containing chemically combined natural resin or derivative admixed with an ethylenic agent or a chemical treating agent other than SICP or SPFI |
|       |   | 54.5  | ..Chemically combined coal, bituminous material, extract, or derivative thereof; oil shale; or fatty still residue   |

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| 55 | ..At least one solid polymer derived from ethylenic reactants only   | 67 | .....With solid polymer derived from at least one hal-C(=O)-hal, O-C(=O)-O or hal-C(=O)-O-reactant wherein at least one of the reactants forming the solid polymer is saturated; or with SPFI wherein at least one of the necessary ingredients is a hal-C(=O)-hal, O-C(=O)-O, or hal-C(=O)-O containing reactant or reaction product thereof; or with a SICP containing a hal-C(=O)- or O-C(=O)-O- group |
| 56 | ...Polyvinyl alcohol   |    |   |
| 57 | ....With solid polymer derived from ethylenic reactants only   |    |   |
| 58 | ....With SICP, SPFI, or polymer thereof  |    |   |
| 59 | ....With ethylenic reactant  |    |   |
| 60 | ....Interpolymers  |    |   |
| 61 | ....Chemical modification utilizing a chemical treating agent  |    |   |
| 62 | ....Processes only of preparing polyvinyl alcohol  | 68 | .....With solid polymer derived from at least one phenolic reactant wherein at least one of the reactants forming the solid polymer is saturated; or with SPFI wherein at least one of the necessary ingredients is a phenolic reactant or with a reaction product thereof; or with phenolic-containing SICP  |
| 63 | ...Mixing of solid graft or graft-type copolymer with other solid polymer wherein one of said solid polymers is not derived from ethylenic reactants only; mixing of said polymer mixture with a chemical treating agent; or mixing of graft or graft-type copolymer with a SICP or SPFI; or processes of forming or reacting; or the resultant product of any of the above operations | 69 | ....Solid graft or graft-type copolymer contains backbone derived from ethylenic reactants only   |
| 64 | ....Solid graft or graft-type copolymer derived from ethylenic reactants only  | 70 | ...Mixing of solid graft or graft-type copolymer derived from ethylenic reactants only with other solid polymer derived from ethylenic reactants only; or treating said mixture with chemical treating agent; or processes of forming or reacting; or the resultant product of any of the above operations  |
| 65 | .....With saturated 1,2-epoxy reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom; or with solid copolymer derived from at least one unsaturated 1,2-epoxy reactant wherein the epoxy reactant contains more than one 1,2-epoxy group per mole and at least one saturated reactant   | 71 | ....Contains two or more graft or graft-type copolymers or a graft or a graft type copolymer and at least one block or block-type copolymer   |
| 66 | .....With solid polymer derived from at least one nitrogen-containing reactant wherein at least one of the reactants forming the solid polymer is saturated; or with SPFI wherein at least one of the necessary ingredients contains a nitrogen atom or with a reaction product thereof; or with nitrogen-containing SICP  | 72 | ....Mixture contains solid polymer derived from reactants containing an atom other than C, H, O, N, or chlorine   |
|    |  | 73 | ....Mixture contains solid polymer derived from reactant containing nitrogen heterocycle  |
|    |  | 74 | ....Mixture contains solid polymer derived from reactant containing oxygen heterocycle  |

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| 75 | ....Mixture contains solid polymer derived from reactant containing a fused- or bridged-ring system or from cycloaliphatic reactant | 88   | ...Mixing of solid block or block-type copolymer with other solid polymer; mixing of said polymer mixture with a chemical treating agent; mixing of a block or block-type copolymer with SICP or with SPFI; or processes of forming or reacting; or the resultant product of any of the above operations |
| 76 | ....Mixture contains solid polymer derived from chlorine-containing reactant other than from vinyl(idene) chloride                  | 89   | ....Mixture contains two or more solid block or block-type copolymers  |
| 77 | ....Mixture contains solid polymer derived from reactant containing nitrogen other than from (meth)acrylonitrile                    | 90   | ....Mixture contains solid block copolymer wherein at least one block is derived from ethylenic reactants only and at least one block is derived from at least one saturated reactant  |
| 78 | ....Mixture contains solid polymer derived from reactant containing carboxylic acid group   | 91   | ....Block derived from at least one saturated reactant containing a heterocycle  |
| 79 | ....Mixture contains solid polymer derived from reactant containing ether or hydroxyl group   | 92 R | ....Mixture contains solid polymer derived from at least one saturated reactant, SICP, or SPFI   |
| 80 | ....Mixture contains solid polymer derived from reactant containing carboxylic acid ester group                                     | 92 A | ....Solid block or block-type copolymer derived from saturated reactants only  |
| 81 | .....Reactant contains at least two ester groups  | 92 B | ....Solid polymer derived from a lactam; from an amino carboxylic acid or derivative; from a polyamine and a polycarboxylic acid or derivative   |
| 82 | .....Ester derived from a polyol  | 92 C | ....Solid polymer derived from -N=C=X reactant, wherein X is chalcogen   |
| 83 | .....Substrate polymer derived from hydrocarbon containing plural unsaturation  | 92 D | ....Solid polymer derived solely from a phenolic reactant or derivative thereof, wherein no reactant contains a plurality of methylol groups   |
| 84 | .....Polymer substrate derived from hydrocarbon reactants only  | 92 E | ....Solid polymer derived from -O-C(=O)-O- or hal-C(=O)-containing reactant  |
| 85 | .....Polymer substrate derived from an unsaturated carboxylic acid ester  | 92 F | ....Solid polymer derived from polyhydroxy reactant and polycarboxylic acid or derivative  |
| 86 | ....Mixture contains solid polymer derived from nonaromatic reactant containing plural ethylenically unsaturated groups             | 92 G | ....Solid polymer derived from silicon-containing reactant   |
| 87 | .....Solid polymer other than graft or graft-type derived from nonaromatic plural ethylenically unsaturated reactant                |      |  |

92 H	.....Solid polymer derived from saturated 1,2-epoxy reactant containing more than one 1,2-epoxy group per molecule	101	....Contacting with nonsilicon-containing SICP, nonsilicon-containing SPFI, or polymer thereof; or with two or more solid polymers
92 J	.....Solid polymer derived from sulfur-containing reactant	102	....Si-H or Si-C reactant contains an atom other than C, H, O, or Si bonded to a carbon atom
92 K	.....Solid polymer derived from saturated aldehyde or aldehyde derivative material	103	....Solid polymer from ethylenic reactants only is derived from heterocyclic reactant
92 L	.....Solid polymer derived from heterocyclic material	104	....Solid polymer from ethylenic reactants only is derived from reactant containing halogen atom
92 M	.....Solid polymer derived from saturated ketone reactant	105	....Solid polymer from ethylenic reactants only is derived from plural unsaturated hydrocarbon
93	....Mixture contains solid polymer derived from reactant containing chalcogen	106	....Solid polymer from ethylenic reactants only is derived from unsaturated hydrocarbon
94	.....Solid block or block-type copolymer derived from reactant containing carboxylic acid ester group	107	...With saturated 1,2-epoxy reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom; or with solid copolymer derived from at least one saturated reactant and at least one unsaturated 1,2-epoxy reactant wherein the epoxy reactant contains more than one 1,2-epoxy group per mole
95	....Mixture contains solid block or block-type copolymer derived from ethylenically unsaturated hydrocarbon reactants only at least one of which contains at least four carbon atoms	108	....Contacting two or more solid polymers derived from ethylenic reactants only with a poly 1,2-epoxy-containing reactant; or contacting a solid polymer derived from ethylenic reactants only with a poly 1,2-epoxy-containing reactant and subsequently contacting with an additional polymer derived from ethylenic reactants only
96	.....With solid polymer derived from reactant containing an atom other than C, H or chalcogen	109	....With phenolic reactant or polymer thereof and is free of 1,2-epoxy groups
97	.....Mixture contains solid polymer derived from reactant containing a fused- or bridged-ring system	110	....With reactant which is an aldehyde, aldehyde derivative, or polymer thereof, and which is free of an 1,2-epoxy group (included herein are alkylated methanol groups)
98	.....Solid block or block-type copolymer derived from reactant containing plural unsaturation		
99	.....With solid polymer derived from reactant containing plural unsaturation		
100	...With saturated Si-C or Si-H reactant or polymer thereof; or with solid copolymer derived from at least one Si-C or Si-H reactant wherein at least one of the reactants forming the solid copolymer is saturated; or with SPFI wherein at least one of the necessary ingredients contains a Si-C or Si-H bond or with a reaction product thereof; or with a SICP containing a Si-H or Si-C bond		

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| 111   | ....With reactant which is free of an 1,2-epoxy group and which contains a -N=C=X group or polymer thereof (X is chalcogen); or with a polyol and a polycarboxylic acid or reaction product thereof which is free of an 1,2 epoxy group | 121 | ....Polymer derived from ethylenic reactants only derived from reactant containing a halogen atom  |
| 111.5 | ....With a reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or a fatty acid derived from tall oil  | 122 | ....Polymer derived from ethylenic reactants only derived from unsaturated hydrocarbon   |
| 112   | ....Contacting polymer from ethylenic reactants only with ethylenic reactant wherein said contacting is either concurrent with or subsequent to the contacting with the saturated poly 1,2-epoxy reactant                               | 123 | ...With saturated -N=C=X (X is chalcogen) reactant or polymer thereof; or with solid copolymer derived from at least one -N=C=X reactant wherein at least one of the reactants forming the solid copolymer is saturated; or with SPFI wherein at least one of the necessary ingredients contains a -N=C=X group or with a reaction product thereof; or with SICP containing a -N=C=X group |
| 113   | ....With nitrogen-containing reactant, or wherein the poly 1,2-epoxy reactant contains a nitrogen atom  | 124 | ....Blocked isocyanate reactant  |
| 114   | ....With additional heterocyclic reactant free of 1,2-epoxy group   | 125 | ....Contacting two or more solid polymers derived from ethylenic reactants only with a -N=C=X reactant or polymer thereof; or contacting a polymer derived from an ethylenic reactant only with a -N=C=X reactant or polymer thereof and subsequently adding thereto a solid polymer derived only from ethylenic reactants   |
| 115   | ....Poly 1,2-epoxy reactant contains an atom other than C, H, or O  | 126 | ....Contacting solid polymer from ethylenic reactants only with ethylenic reactant wherein said contacting is either concurrent with or subsequent to contacting of said solid polymer with the -N=C=X reactant or polymer thereof   |
| 116   | ....Polymer derived from ethylenic reactants only derived from reactant containing an atom other than C, H, N, O, or halogen  | 127 | ....Contacting with a -N=C=X-containing reactant which has been previously reacted with an organic compound containing a hydroxyl, amine, or -C(=O)-O- group   |
| 117   | ....Polymer derived from ethylenic reactants only derived from heterocyclic reactant  | 128 | ....-N=C=X reactant has been previously reacted with an organic amine  |
| 118   | ....Polymer derived from ethylenic reactants only derived from reactant containing an alcohol or ether group (includes phenols)   | 129 | ....Solid polymer from ethylenic reactants only derived from halogen-containing reactant   |
| 119   | ....Polymer derived from ethylenic reactants only derived from reactant containing a -COOH group  |     |  |
| 120   | ....Polymer derived from ethylenic reactants only derived from nonaromatic monoolefin   |     |  |

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| 130   | .....Solid polymer from ethylenic reactants only derived from hydrocarbon reactant   | 137 | .....Phenolic reactant prior to contact with aldehyde or aldehyde-type reactant contains at least two aryl rings each of which contains phenolic substituents            |
| 131   | ....Contacting with -N=C=X- containing reactant and with additional organic reactant containing a hydroxyl or amine group or polymer thereof   | 138 | ....With nonethylenic, nonaldehyde, or nonaldehyde-type reactant containing an atom other than C, H, or O  |
| 132   | ...With saturated phenolic reactant or polymer thereof; or with solid copolymer derived from at least one phenolic reactant wherein at least one of the reactants forming the solid copolymer is saturated; or with SPFI wherein at least one of the necessary ingredients is a phenolic reactant or with a reaction product thereof; or with a SICP containing a phenolic group Si-H or Si-C bond | 139 | .....Solid polymer derived from ethylenic reactants only is derived from reactant containing at least two ethylenic groups   |
| 133   | ....Contacting two or more solid polymers with a phenolic reactant; or contacting a solid polymer with a phenolic reactant and subsequently contacting the treated polymer with an additional solid polymer  | 140 | .....Phenolic reactant has at least two nuclear carbon atoms directly bonded to extracyclic carbon atoms which extracyclic carbon atoms are not part of a methylol group |
| 133.5 | ....With a reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or a fatty acid derived from tall oil   | 141 | .....Solid polymer from ethylenic reactants only is derived from both a reactant containing two ethylenic groups and an acyclic monoethylenic hydrocarbon                |
| 134   | ....Contacting with aldehyde or aldehyde-type reactant or polymer therefrom  | 142 | .....Solid polymer derived from ethylenic reactants only is derived from a nitrogen-containing reactant  |
| 135   | .....At least two distinct phenols, phenol ethers, inorganic phenolates, or mixtures thereof prior to reaction with aldehyde or aldehyde-type reactant derived from tall oil   | 143 | .....Solid polymer derived from ethylenic reactants only is derived from a reactant containing a carboxylic acid or derivative thereof                                   |
| 136   | .....Phenolic reactant prior to contact with aldehyde or aldehyde-type reactant contains an atom other than C, H, or O   | 144 | .....Solid polymer derived from ethylenic reactants only is derived from a reactant containing at least one halogen atom   |
|       |  | 145 | .....Solid polymer derived from ethylenic reactants only is derived from an acyclic hydrocarbon  |
|       |  | 146 | ....With a -O-C(=O)-O-, -O-C(=O)-hal or hal-C(=O)-hal group-containing reactant or polymer thereof   |
|       |  | 147 | .....Two or more diverse phenolic reactants; or phenolic reactant contains an atom other than C, H, or O   |



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| <p>148 .....Solid polymer derived from ethylenic reactants only is derived from a reactant containing a carboxylic acid or derivative thereof</p> <p>149 .....Contains ethylenic reactant other than from a solid polymer derived from ethylenic reactants only, e.g., reaction product from a phenol and unsaturated hydrocarbon, etc.</p> <p>150 .....Phenolic reactant contains a phosphorus or sulfur atom or with phosphorus- or sulfur-containing reactant</p> <p>151 .....Solid polymer derived from ethylenic reactants only is derived from a reactant containing at least one halogen atom</p> <p>152 .....Solid polymer derived from ethylenic reactants only is derived from a reactant containing a polycyclic ring system or two or more ethylenic groups</p> <p>153 ...With saturated ketone reactant or polymer thereof; or with solid copolymer derived from at least one ketone reactant wherein at least one of the reactants forming the solid copolymer is saturated; or with SPFI wherein at least one of the necessary ingredients is a ketone or with a reaction product thereof; or with a SICP containing a ketone group</p> <p>154 ...With saturated aldehyde or aldehyde derivative (including methylol ethers or condensates) reactant or solid polymer thereof; or with solid copolymer derived from at least one aldehyde or aldehyde derivative reactant wherein at least one of the reactants forming the solid copolymer is saturated; or with SPFI wherein at least one of the necessary ingredients is an aldehyde or aldehyde derivative reactant or with a reaction product thereof; or with SICP containing an aldehyde or aldehyde derivative</p> | <p>155 ....Contacting two or more solid polymers derived from ethylenic reactants only with an aldehyde or aldehyde-type reactant; or contacting a polymer derived from ethylenic reactant and subsequently contacting with a solid polymer derived from ethylenic reactants only</p> <p>156 ....Contacting with a hydrocarbon and an aldehyde or aldehyde derivative as reactants at least one of which is saturated, their condensate or solid polymer thereof</p> <p>157 ....Contacting with an amine, a material containing a N-C(=X)- or N-S(=O)- (X is chalcogen) reactant and an aldehyde or aldehyde derivative at least one of which is saturated, their condensate or solid polymer thereof</p> <p>158 .....Reactant, condensate, or solid polymer contains an element other than C, H, N, or O; or wherein a coreactant is not an aldehyde or aldehyde-type reactant, alcohol, amine, or reactant containing a N-C(=O)- group</p> <p>159 .....Reactant derived from alcohol containing an aryl group or eight or more carbon atoms</p> <p>160 .....Solid polymer derived from ethylenic reactants only contains an element other than C, H, O, or N</p> <p>161 .....Solid polymer derived from ethylenic reactants only derived from reactant containing a heterocyclic ring or fused-, bridged-ring system excluding an anhydride group which produces the fused- or bridged-ring system or heterocyclic ring</p> <p>162 .....Solid polymer derived from ethylenic reactant only derived from reactant containing hydroxyl or ether group</p> |
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| 163   | .....Solid polymer derived from ethylenic reactants only containing a carboxylic acid, ester, or anhydride group   | 170 | .....Solid polymer derived from ethylenic reactants only derived from at least one reactant containing an oxygen atom   |
| 164   | .....Solid polymer derived from unsaturated hydrocarbon  | 171 | .....Solid polymer derived from ethylenic reactants only derived from at least one hydrocarbon reactant containing at least two ethylenic groups  |
| 165   | ...With polycarboxylic acid or derivative and a polyol at least one of which is saturated, a condensate or solid polymer thereof; or with solid polymer derived from at least one polycarboxylic acid or derivative and at least one polyol wherein at least one the reactants forming the solid polymer is saturated  | 172 | ....Polycarboxylic acid or derivative contains three or more carboxylic acid groups or derivatives thereof; or wherein a polyol contains at least three hydroxyl groups   |
| 166   | ....Two or more solid polymers present other than derived from a polycarboxylic acid or derivative and a polyol  | 173 | ....From two or more polyols  |
| 167   | ....Polycarboxylic acid or derivative or polyol contains an atom other than C, H, or O; or wherein a polycarboxylic acid or derivative or polyol or condensate thereof is reacted with a reactant containing atoms other than C, H, or O prior to blending with the solid polymer; or wherein a coreactant with the polycarboxylic acid or derivative or polyol contains an atom other than C, H, or O | 174 | ....From two or more carboxylic acids or derivatives thereof  |
| 167.5 | ....With a reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or a fatty acid derived from tall oil   | 175 | ....Solid polymer derived from ethylenic reactants only derived from at least one reactant containing an atom other than C, H, O, or Hal  |
| 168   | ....Polycarboxylic acid or derivative, polyol, or other coreactant contains an ethylenic group; or wherein a condensate thereof has been prepared from a polycarboxylic acid or derivative and a polyol and subsequently reacted with an ethylenic reactant  | 176 | ....Solid polymer derived from ethylenic reactants only derived from at least one reactant containing an oxygen atom  |
| 169   | .....Solid polymer derived from ethylenic reactants only derived from at least one reactant containing an atom other than C, H, or O   | 177 | ....Solid polymer derived from ethylenic reactants only derived from unsaturated hydrocarbon  |
|       |  | 178 | ...With a polycarboxylic acid or derivative and a polyamine or the corresponding salt thereof; or with a lactam; or with an aminocarboxylic acid; or with the corresponding polymers; and wherein the monomer or polymer was derived from at least one saturated reactant |
|       |  | 179 | ....Two or more solid polymers other than prepared from a polycarboxylic acid or derivative and a polyamine, a lactam, an aminocarboxylic acid or derivative, or from a polyamine salt of a polycarboxylic acid   |

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| 180 | ....Polycarboxylic acid or derivative contains three or more carboxylic acid groups; or polyamine contains three or more amino groups; or from an amino containing polycarboxylic acid or derivative other than amine solely in salt form; or from polyamino carboxylic acid or derivative other than wherein amino groups are solely in salt form | 191 | ...Polymer mixture of two or more solid polymers derived from ethylenically unsaturated reactants only; or mixtures of said polymer mixture with a chemical treating agent; or products or processes of preparing any of the above mixtures |
| 181 | ....With ethylenically unsaturated reactant; or reactant contains a heterocyclic ring other than solely as a lactam or cyclic anhydride of a polycarboxylic acid   | 192 | ....Treating polymer or polymer mixture with a chemical treating agent other than solid polymer   |
| 182 | ....Solid polymer derived from ethylenically unsaturated reactant only is one derived from a reactant containing a heterocyclic ring and is other than solely a cyclic anhydride of a polycarboxylic acid  | 193 | ....Agent contains an ethylenic group   |
| 183 | ....Solid polymer derived from ethylenically unsaturated reactant only is derived from a reactant containing a carboxylic acid or derivative   | 194 | ....Agent is an organic material  |
| 184 | ....Solid polymer derived from ethylenically unsaturated hydrocarbon   | 195 | .....Contains a metal atom  |
| 185 | ...With additional solid polymer derived from at least one nonethylenic reactant   | 196 | ....Agent contains a metal atom   |
| 186 | ....At least one reactant which forms additional polymer contains a heterocyclic ring  | 197 | ....Specified blending process  |
| 187 | .....Heterocyclic ring is an 1,2-epoxy ring  | 198 | ....With subsequent physical treatment  |
| 188 | ....At least one reactant which forms additional polymer contains a phosphorus atom  | 199 | ....Solid polymer derived from fluorine-containing ethylenic reactant   |
| 189 | ....At least one reactant which forms additional polymer contains a sulfur atom  | 200 | ....Fluorine reactant contains atoms other than C, H, or Hal  |
| 190 | ....At least one reactant which forms additional polymer contains a carboxylic acid or derivative  | 201 | ....Solid polymer derived from metal-containing ethylenic reactant  |
|     |  | 202 | ....Solid polymer derived from reactant containing an acetylenic group  |
|     |  | 203 | ....Solid polymer derived from ethylenic reactant containing a heterocyclic nitrogen  |
|     |  | 204 | ....Heterocyclic reactant contains at least two hetero atoms in the same ring and at least one of which is nitrogen   |
|     |  | 205 | ....Heterocyclic reactant is an imide or lactam   |
|     |  | 206 | ....Solid polymer derived from reactant containing a chalcogen atom (O, S, Se, Te) as part of a heterocyclic ring   |
|     |  | 207 | ....Heterocyclic reactant contains anhydride group  |
|     |  | 208 | ....Heterocyclic reactant contains 1,2-epoxy group  |
|     |  | 209 | ....Solid polymer derived from reactant containing elements other than C, H, O, N, S, or Cl   |
|     |  | 210 | ....Solid polymer derived from reactant containing a fused- or bridged- ring system   |

211	.....Fused- or bridged-ring reactant contains at least two ethylenic groups	230	.....Polymer derived from nitrogen-containing reactant
212	....Solid polymer derived from sulfur-containing reactant	231	....Solid polymer derived from oxygen-containing reactant
213	....Solid polymer derived from chlorine-containing reactant other than vinyl(idene) chloride	232	....Solid polymer derived from reactant containing at least two ethylenic groups and is devoid of aryl ring
214	.....Halogenated hydrocarbon other than vinyl(idene) chloride	233	....Polymer derived from nitrogen-containing reactant
215	.....Halogenated hydrocarbon contains at least two ethylenic groups and is devoid of an aryl ring	234	.....At least two polymers derived from nitrogen-containing reactants
216	....Solid polymer derived from cycloaliphatic-containing reactant	235	....Polymer derived from halogen-containing reactant
217	....Solid polymer derived from reactant containing nitrogen atom other than from (meth)acrylonitrile	236	....At least two polymers derived from reactants containing two or more ethylenic groups and devoid of an aryl ring
218	.....Nitrogen reactant contains a carboxylic acid amide group	237	.....At least one of these polymers is derived from two or more reactants
219	....Solid polymer derived from reactant containing a phenolic group	238	....Solid polymer derived from (meth)acrylonitrile
220	....Solid polymer derived from reactant containing a carbonyl group other than as part of a carboxylic acid or derivative	239	....Solid polymer derived from vinyl(idene) chloride
221	....Solid polymer derived from reactant containing a carboxylic acid group	240	....Solid polymer derived from ethylene or propylene
222	....Solid polymer derived from reactant containing a carboxylic acid ester group	241	....Solid polymer derived from an aromatic hydrocarbon reactant
223	.....Ester contains an oxygen atom other than as part of a carboxylic acid ester group	242	...Polymer derived from ethylenic reactants only mixed with ethylenic reactant
224	.....Ester derived from both an unsaturated carboxylic acid and an unsaturated alcohol	243	....Reactions with ethylenic reactants in two or more diverse phases, e.g., bulk, emulsion, melt, solution, etc.
225	.....Ester contains at least two carboxylic acid ester groups	244	....Contacting a solid polymer derived from ethylenic reactants only with an ethylenic reactant in the presence of a specified material
226	.....Ester derived from polyol	245	.....Specified material contains transition metal atom
227	.....Ester derived from an unsaturated carboxylic acid	246	.....In presence of water
228	.....At least two polymers derived from carboxylic acid ester reactants	247	.....Contains nontransition metal atom
229	.....Ester derived from an unsaturated alcohol	248	.....Specified material contains a carbon or hydrogen atom bonded directly to a metal atom
		249	.....Metal atom is aluminum

250	.....Metal atom is Group IA metal atom (Li, Na, K, Rb, Cs, Fr)	271	.....Specified material contains a Group IA atom in elemental form or bonded to hydrogen or carbon
251	.....Specified material contains a boron atom	272	.....Contains an atom other than Group IA, C, or H
252	.....Specified material is a carbohydrate or is a solid synthetic polymer not intended to be in the final product	273	.....Specified material contains a compound containing a peroxy group, i.e., -O O-
253	.....Material contains a free alcohol group or is alcoholate thereof	274	....Ethylenic reactant contains a metal atom
254	.....Specified material contains silicon atom	275	....Ethylenic reactant contains an acetylenic group
255	.....Specified material contains a phosphorus atom	276	....Ethylenic reactant contains a fluorine atom
256	.....Specified material contains a heterocyclic ring	277	....Ethylenic reactant contains a carbonate group
257	.....Specified material contains a ketone group	278	....Ethylenic reactant contains a carbamate group
258	.....Specified material contains an ether group	279	....Ethylenic reactant contains nitrogen heterocycle, e.g., pyridine, diazines, etc.
259	.....Specified material contains an organic nitrogen compound	280	.....Block copolymer
260	.....Organic nitrogen compound contains an azo group, i.e., -N=N-	281	.....Nitrogen heterocycle contains at least two nitrogen atoms in the same ring
261	.....Specified material contains an organic sulfur compound	282	.....Imide
262	.....Specified material contains a carboxylic acid or derivative	283	.....Lactam
263	.....Specified material contains a peroxy group, i.e., -O-O-	284	....Ethylenic reactant contains a chalcogen heterocycle
264	.....Contains nonperoxy compound or inorganic peroxy compound	285	.....Cyclic anhydride
265	.....Aromatic or cycloaliphatic peroxy compound	286	.....Three-membered ring containing two carbon and one chalcogen atom
266	.....Specified material contains an organic chalcogen compound	287	....Ethylenic reactant contains a phosphorus atom
267	....Including step of preparing a polymer in the presence of a specified material and in the absence of a preformed polymer derived from ethylenic reactant only	288	....Ethylenic reactant contains atoms other than C, H, O, N, S, or Cl
268	.....Specified material contains a transition metal atom	289	....Ethylenic reactant contains a fused- or bridged-ring system
269	.....Transition metal is other than Group IVB, VB, or VIB metal atom	290	.....Dicyclopentadiene-containing group
270	.....With nonmetal, nonhydrocarbon compound	291	....Ethylenic reactant contains a sulfur atom
		292	....Ethylenic reactant contains a chlorine atom and is other than vinyl(idene) chloride
		293	....Ethylenic material contains a nitrogen atom and is other than (meth)acrylonitrile
		294	.....Block copolymer derived from nitrogen-containing reactant

295	.....Nitrogen atom is part of a nitrile group and is other than (meth)acrylonitrile	313	....Ethylenic reactant contains at least two unsaturated groups and is devoid of an aromatic group
296	.....Nitrogen atom is part of a carboxylic acid amide group	314	.....Block copolymer derived from reactant containing at least two unsaturated groups and is free of an aromatic group
297	....Ethylenic reactant contains a cycloaliphatic group	315	.....Ethylenic reactant reacted in the presence of a solid polymer substrate derived from reactant containing two unsaturated groups and is devoid of an aromatic group
298	....Ethylenic reactant contains an oxygen atom	316	.....Ethylenic reactant is an aromatic hydrocarbon
299	.....Block copolymer derived from oxygen-containing reactant	317	....Ethylenic reactant is vinyl(idene) chloride
300	.....Oxygen atom is part of a ketone or ketene group	318	.....Block copolymer derived from vinyl(idene) chloride
301	.....Oxygen atom is part of a carboxylic acid group	319	....Ethylenic reactant is acyclic hydrocarbon
301.5	.....Unsaturated fatty acid derived from a naturally occurring glyceride, tall oil, or an unsaturated fatty acid derived from tall oil	320	.....Acyclic hydrocarbon contains five or more carbon atoms
302	.....Oxygen atom is part of a carboxylic acid ester group	321	.....Block copolymer derived from acyclic hydrocarbon containing five or more carbon atoms
303	.....Ester contains an oxygen atom other than as a carboxylic acid ester group	322	....Acyclic hydrocarbon is propylene
304	.....Ester contains at least two carboxylic acid ester groups	323	.....Block copolymer derived from propylene
305	.....Ester is derived from a polyol	324	.....Acyclic hydrocarbon is ethylene
306	.....Ester is derived from an unsaturated alcohol	326.1	...Chemically after treated solid polymers derived from ethylenically unsaturated monomers only
307	.....Ester is derived from an unsaturated carboxylic acid and an unsaturated alcohol	326.2	....Polymer derived from fluorine monomer
308	.....Ester is derived from an unsaturated carboxylic acid	326.3	....Vulcanized or crosslinked in presence of chemical treating agent
309	.....Ester derived from an unsaturated carboxylic acid is reacted in the presence of a solid polymer	326.4	....Halogen containing chemical treating agent; or dehalogenated
310	.....Ester reactant derived from an unsaturated carboxylic acid is reacted in the presence of a solid polymer substrate derived from a polyene hydrocarbon	326.5	....Polymer derived from silicon monomer
311	.....Ester reactant derived from an unsaturated alcohol is reacted in the presence of a solid polymer	326.6	....Polymer derived from monomer containing atom other than: C, H, N, O, S, halogen or group IA or IIA carboxylate
312	.....Oxygen atom is part of an ether group	326.7	....Polymer derived from monomer containing nitrogen atom as part of a heterocyclic ring

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| 326.8 | .....Oxygen atom in ring or bonded directly to the nuclear carbon of ring monomer  | 328.7 | ....Polymer derived from aldehyde monomer  |
| 326.9 | .....Lactam monomer, e.g., vinyl pyrrolidone, etc.   | 328.8 | ....Polymer derived from alcohol monomer   |
| 327.1 | .....6 membered ring containing 5 carbons and 1 nitrogen, monomer, e.g., vinyl pyridine, etc.  | 328.9 | ....Polymer derived from ether monomer   |
| 327.2 | ....Polymer derived from monomer containing chalcogen as part of heterocyclic ring other than solely as cyclic anhydride of ethylenically unsaturated dicarboxylic acid          | 329.1 | ....Polymer derived from acrylonitrile or methacrylonitrile monomer  |
| 327.3 | .....Three membered chalcogen ring monomer, e.g., oxirane, etc.  | 329.2 | .....Interpolymers   |
| 327.4 | ....Polymer derived from carboxylic acid anhydride monomer   | 329.3 | .....Contains monomer having two or more ethylenic groups  |
| 327.5 | .....Sulfur containing chemical treating agent   | 329.4 | ....Polymer derived from acrylamide or methacrylamide monomer  |
| 327.6 | .....Nitrogen containing chemical treating agent other than unsubstituted ammonium as sole nitrogen  | 329.5 | ....Polymer derived from carboxylic acid or derivative monomer other than: vinyl acetate; or acrylic-or-methacrylic-acid, or derivatives |
| 327.7 | .....Esterified, i.e., preparation of COOR linkage   | 329.6 | .....Butene dioic acid or derivative monomer   |
| 327.8 | .....Hydrolyzed; neutralized; or metal containing chemical treating agent  | 329.7 | ....Polymer derived from acrylic or methacrylic acids, acid halides or salt monomers   |
| 327.9 | ....Polymer from unsaturated petroleum hydrocarbon fraction as monomer   | 329.8 | .....Sulfur or phosphorus containing chemical treating agent   |
| 328.1 | ....Polymer derived from acetylenic monomer  | 329.9 | .....Nitrogen containing chemical treating agent   |
| 328.2 | ....Polymer derived from monomer containing nitrogen other than: unsubstituted ammonium, acrylonitrile, acrylamide, methylolacrylamide and the corresponding methacryl materials | 330.1 | .....Esterified, i.e., preparation of COOR linkage   |
| 328.3 | .....At least one monomer containing two or more ethylenic groups  | 330.2 | .....Hydrolyzed; neutralized; or metal containing chemical treating agent  |
| 328.4 | .....Monomer containing two or more nitrogen atoms, or two or more nitrogen containing monomers  | 330.3 | ....Polymer derived from acrylic or methacrylic esters, or vinyl acetate monomer   |
| 328.5 | ....Polymer derived from sulfur monomer  | 330.4 | .....Sulfur or phosphorus containing chemical treating agent   |
| 328.6 | ....Polymer derived from ketone monomer  | 330.5 | .....Nitrogen containing chemical treating agent   |
|       |  | 330.6 | .....Alcoholized; transesterified; hydrolyzed; or metal containing chemical treating agent; e.g., saponified, etc.                       |
|       |  | 330.7 | ....Polymer derived from halogen monomer   |
|       |  | 330.8 | .....At least one monomer contains two or more ethylenic groups  |

330.9	.....Vulcanized or crosslinked, in the presence of a chemical treating agent, e.g., cured, etc.	333.6	.....Nitrogen containing chemical treating agent
331.1	.....Nitrogen containing chemical treating agent	333.7	....Polymer derived from acyclic hydrocarbon monomer only
331.2	.....Halogen containing chemical treating agent	333.8	.....Air, elemental oxygen, ozone or peroxide chemical treating agent
331.3	.....Nitrogen containing chemical treating agent	333.9	.....Sulfur containing chemical treating agent
331.4	.....Monomer contains chlorine	334.1	....Halogenated polymer
331.5	.....Vinyl chloride or vinylidene chloride	337	...Chemical treating agent contains boron or boron-containing compound other than boron trihalide or nonmetal complex thereof
331.6	.....Halogen containing chemical treating agent	338	...Chemical treating agent contains elemental hydrogen or an elemental hydrogen-liberating compound, e.g., hydrogenation, etc.
331.7	....Ethylene-propylene terpolymer, e.g., EPT, EPDM, EPR, etc.	339	....Treating in the presence of an elemental metal or inorganic metallic compound
331.8	.....Sulfur containing chemical treating agent	340	...Chemical treating agent contains a phosphorus atom
331.9	....Polymer derived from monomer containing at least two ethylenic groups or diene rubber	341	....Contains a sulfur atom
332.1	.....Monomer contains non-conjugated diene group or at least one fused or bridged ring or at least one cycloaliphatic structure	342	...Chemical treating agent contains a silicon atom
332.2	.....Divinyl benzene	343	...Chemical treating agent contains a sulfur atom
332.3	.....Halogen containing chemical treating agent	344	....Inorganic sulfur compound contains sulfur atom bonded to at least two oxygen atoms
332.4	.....Sulfur containing chemical treating agent	345	....With peroxide, ozone, or free oxygen
332.5	....Vulcanized in the presence of a chemical treating agent, e.g., cured, crosslinked, etc.	346	....With sulfur-free organic compound
332.6	.....Sulfur containing chemical treating agent	347	.....Sulfur-free organic compound contains heterocyclic nitrogen
332.7	.....Nitrogen containing chemical treating agent	348	....Sulfur-containing heterocyclic compound
332.8	....Interpolymer with aliphatic hydrocarbon monomer (includes additional diene monomer)	349	.....Heterocyclic ring contains sulfur and nitrogen atoms
332.9	....Interpolymer with aromatic hydrocarbon	350	....Mercaptan or mercaptide
333.1	.....Isoprene or diene rubber other than butadiene rubber	351	....Organic compound contains sulfur and nitrogen atoms
333.2	.....Butadiene homopolymer	352	.....One or more sulfur atoms of the nitrogen-containing compound are double bonded to carbon
333.3	....Polymer derived from aromatic hydrocarbon monomer, e.g., styrene, etc.	353	....Sulfur compound contains sulfur atom bonded to at least two oxygen atoms, e.g., sulfonate, etc.
333.4	.....Halogenated polymer		
333.5	.....Sulfur containing chemical treating agent		



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| 354   | ....Elemental sulfur or inorganic sulfur compound  | 368 | .....Metal oxide  |
| 355   | ...Chemical treating agent contains hydrogen halide, elemental halogen, organic halogen-containing compound, or compound containing only halogen atoms | 369 | .....Metal hydroxide  |
| 356   | ....Treating in the presence of elemental halogen  | 370 | ....Contains Group IB (Cu, Ag, Au), IIB (Zn, Cd, Hg), IIIA (Al, Ga, In, Tl), IV (Ti, Zr, Hf, Ge, Sn, Pb), and VIII (Fe, Co, Ni, Ru, Rh, Pd, Os, Ir, Pt) elemental metal or compound thereof |
| 357   | .....Treating in the presence of a metal or metal-containing compound  | 371 | ....Elemental metal or inorganic compound thereof   |
| 358   | .....Treating in the presence of water   | 372 | .....Metal oxide  |
| 359.1 | ....Treating in the presence of organic halogen-containing compound  | 373 | .....Group IIB metal (Zn, Cd, Hg) oxide   |
| 359.2 | .....Organic halogen-containing compound contains a hetero ring  | 374 | ...Chemical treating agent is a nitrogen-containing compound  |
| 359.3 | .....Organic halogen-containing compound contains oxygen   | 375 | ....Contains nitrogen atom in a heterocyclic ring   |
| 359.4 | .....Organic halogen-containing compound contains a (C=O)O group or an aromatic group  | 376 | ....Nitrogen-containing compound has at least one nitrogen-to-nitrogen bond   |
| 359.5 | .....Organic halogen-containing compound contains only carbon, hydrogen, and halogen   | 377 | ....Nitrogen-containing compound contains at least one nitrile or isonitrile group; or a nitrogen-to-oxygen bond which is other than as an amine or ammonium salt                           |
| 359.6 | .....Organic halogen-containing compound contains an aromatic group  | 378 | ....Ammonia, ammonium hydroxide, or salts thereof   |
| 360   | ...Chemical treating agent contains elemental metal or metal-containing compound   | 379 | ....Organic amine   |
| 361   | ....Two or more diverse elemental metals or compounds thereof; or same metal in two or more distinct compounds; or diverse metals in same compound     | 380 | ....Amine contains a hydroxyl group   |
| 362   | .....Elemental metal or inorganic compound thereof only  | 381 | .....Three or more amine groups   |
| 363   | .....Aluminum or Group IIB (Zn, Cd, Hg) metal or compound thereof  | 382 | .....Two amine groups   |
| 364   | .....Organometallic compound and elemental metal or inorganic compound thereof   | 383 | ...Chemical treating agent contains elemental oxygen or oxygen-containing compound  |
| 365   | .....Aluminum metal or compound thereof  | 384 | ....Oxygen compound contains at least one alcohol group   |
| 366   | ....Contains Group IA (Li, Na, K, Rb, Cs, Fr) or Group IIA (Be, Mg, Ca, Sr, Ba, Ra) elemental metal or compound thereof                                | 385 | ....Oxygen compound contains an ether group   |
| 367   | .....Elemental metal or inorganic metal compound   | 386 | ....Oxygen compound is a carboxylic acid, ester, anhydride, or lactone thereof  |
|       |  | 387 | ....Oxygen compound contains a peroxy group (-O-O-)   |
|       |  | 388 | ....Specified oxygen-containing compound is air, elemental oxygen, or ozone   |
|       |  | 389 | ..Solid polymer derived from reactant containing atoms other than C, H, N, Si, P, chalcogen, halogen, or an alkali or alkaline earth metal in salt form                                     |

390	..Solid polymer derived solely from phenolic reactants wherein none of the reactants contains a plurality of methylol groups or derivatives thereof	404	...Mixed with ethylenically unsaturated reactant or polymer therefrom
391	...Mixed with ethylenically unsaturated reactant or polymer derived therefrom	405	...Mixed with aldehyde or aldehyde derivative reactant or polymer therefrom
392	...Unsaturated aromatic reactant or polymer thereof	406	...Contains amine-, N-C(=X)-, or N-S(=O)- containing reactant (X is chalcogen)
393	...Mixed with silicon-containing reactant or polymer derived therefrom	407	...Mixed with 1,2-epoxy reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom
394	...Mixed with -O-C(=O)-O-, hal-C(=O)-O-, or hal-C(=O)-hal containing reactant or polymer derived therefrom	408	...Mixed with carboxylic acid or derivative or polymer derived therefrom
395	...Mixed with -N=C=X-containing reactant or polymer therefrom (X is chalcogen)	409	...Solid polymer derived only from 1,2-epoxy reactants containing only C, H, and O
396	...Mixed with 1,2-epoxy containing reactant or polymer therefrom, or wherein polymer contains at least one 1,2-epoxy group	410	..Solid polymer derived from hetero-O-cyclic compounds as sole reactants wherein at least one reactant contains a hetero-O-ring other than solely as a 1,2-epoxy or anhydride, and wherein none of the reactants contains a plurality of methylol groups or derivatives thereof
397	...Mixed with carboxylic acid or derivative reactant or polymer derived therefrom	411	...Mixed with carboxylic acid or derivative reactant or polymer therefrom
398	..Solid polymer derived from aldehyde, aldehyde derivative, or liquid polymer thereof as sole reactant and wherein none of the reactants contains a plurality of methylol groups or derivatives thereof	412	...Mixed with unsaturated reactant or polymer therefrom
399	...Mixed with -N=C=X-containing reactant or polymer derived therefrom (X is a chalcogen)	413	...Mixed with -O-C(=O)- or hal-C(=O)- reactant or polymer derived therefrom
400	..Mixed with carboxylic acid or derivative reactant or polymer derived therefrom	414	...Mixed with aldehyde or aldehyde derivative or polymer derived therefrom
401	...Mixed with ethylenically unsaturated reactant or polymer derived therefrom	415	...Solid polymer derived from carboxylic acid cyclic ester, e.g., lactone, etc.
402	...Solid polymer derived from aldehyde or derivative containing halogen	416	..Solid polymer derived from hydrocarbon or halogenated hydrocarbon as sole reactant or mixture thereof
403	..Solid polymer is derived from 1,2-epoxy compound containing only one 1,2 epoxy group as sole reactant and wherein none of the reactants contains a plurality of methylol groups or derivatives thereof		

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| 417   | ..Solid polymer derived from heterocyclic materials as sole reactants wherein each of the heterocyclic materials contains a hetero ring other than solely as a lactam, 1,2-epoxy or carboxylic acid anhydride and wherein none of the reactants contains a plurality of methylol groups or derivatives thereof                      | 426 | .....Mixed with ethylenically unsaturated reactant or polymer therefrom  |
| 418   | ..Solid polymer derived from at least one carboxylic acid or derivative   | 427 | .....Mixed with aldehyde or aldehyde derivative reactant or polymer therefrom  |
| 419   | ...Solid polymer derived from at least one lactam; from an amino carboxylic acid or derivative; or from a polycarboxylic acid or derivative   | 428 | .....Contains amine-, N-C(=X)-, or N-S(=O)- containing reactant or polymer thereof (X is chalcogen)  |
| 420   | ....Solid polymer derived from an amino carboxylic acid or derivative; from a polyamine and a polycarboxylic acid or derivative; from at least one lactam; or from a polyamine salt of a polycarboxylic acid  | 429 | .....Contains phenolic reactant or polymer thereof   |
| 420.5 | .....Solid polymer derived from a polycarboxylic acid which is a dimer or trimer of an aliphatic acyclic monocarboxylic acid having at least ten carbon atoms or adducts of unsaturated aliphatic acyclic monocarboxylic acids, having ten carbon atoms with an alpha, beta ethylenically unsaturated carboxylic acid or derivative | 430 | .....Mixed with a reactant containing a single 1,2-epoxy group per mole or polymer derived therefrom   |
| 421   | .....Solid polymer derived from reactant containing ethylenic unsaturation  | 431 | .....Mixed with silicon containing reactant or polymer derived from  |
| 422   | .....Solid polymer derived from imide reactant  | 432 | .....Mixed with additional polycarboxylic acid and a polyamine; amino carboxylic acid or derivative; polyamine salt of a polycarboxylic acid; lactam; or polymer derived therefrom |
| 423   | .....Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom   | 433 | .....Mixed with O-C(=O)-O-, hal-C(=O)-, or hal-C(=O)-hal reactant or polymer derived therefrom   |
| 424   | .....Mixed with -N=C=X reactant or polymer derived therefrom (X is chalcogen)   | 434 | .....Solid polymer derived from hydroxyl group-containing reactant   |
| 425   | .....Mixed with polycarboxylic acid or derivative and polyhydroxy reactant or polymer therefrom   | 435 | .....Solid polymer derived from compound containing more than two amine groups   |
|       |   | 436 | .....Solid polymer derived from compound containing more than two carboxylic acid groups or derivatives thereof  |
|       |   | 437 | ....Solid polymer derived from polyhydroxy reactant and polycarboxylic acid or derivative reactant; or derived from di- or higher ester of a polycarboxylic acid as sole reactant  |
|       |   | 438 | .....Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom  |

- 439 .....Mixed with O-C(=O)-O-, hal-C(=O)-O-, or hal-C(=O)-hal containing reactant or polymer derived therefrom; or wherein solid polymer is derived from a hal-C(=O)-hal, O-C(=O)-O-, or hal-C(=O)-O-, a polycarboxylic acid or derivative and a polyhydroxy reactant
- 440 .....Mixed with -N=C=X reactant or polymer derived therefrom (X is chalcogen); or wherein solid polymer is derived from a -N=C=X reactant and also a polycarboxylic acid or derivative and a polyhydroxy reactant
- 441 .....Mixed with aldehyde or aldehyde derivative reactant or polymer derived therefrom
- 442 .....Contains phenolic reactant or polymer thereof
- 443 .....Contains an amine-, N-C(=X)-, or N-S(=O)-containing reactant or polymer thereof (X is chalcogen)
- 444 .....Mixed with polycarboxylic acid or derivative and polyhydroxy reactant or polymer thereof
- 444.5 .....Solid polymer derived from or system contains a reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or fatty acid derived from tall oil
- 445 .....Mixed with ethylenically unsaturated reactant or polymer therefrom
- 446 .....Mixed with silicon-containing reactant or polymer derived therefrom
- 447 .....Solid polymer derived from polycarboxylic acid or derivative and a polyhydroxy compound derived from reactant containing ethylenic unsaturation
- 448 .....Solid polymer derived from polycarboxylic acid or derivative and polyhydroxy compound is derived from two or more polycarboxylic acids or derivatives
- 449 ....Mixed with 1,2-epoxy reactant or polymer derived therefrom
- 450 ...Solid polymer derived from hydroxy-containing carboxylic acid or derivative reactant
- 451 ...Solid polymer derived from carboxylic acid or derivative derived from ethylenically unsaturated reactant
- 452 ..Solid polymer derived from -N=C=X reactant (X is chalcogen)
- 453 ...Solid polymer derived from -N=C=X reactant and polyhydroxy reactant
- 454 ....Mixed with carboxylic acid or derivative reactant or polymer derived therefrom; or with heterocyclic reactant containing more than one heterocyclic ring; or polymer therefrom
- 455 ....Mixed with ethylenically unsaturated reactant or polymer therefrom
- 456 ....Mixed with aldehyde or aldehyde derivative reactant or polymer therefrom
- 457 ....Mixed with -N=C=X reactant or polymer therefrom
- 458 .....Contains polyhydroxy reactant; or additional polymer derived from -N=C=X and polyhydroxy reactant
- 459 ...Solid polymer derived from -N=C=X reactant and polyhydroxy reactant also derived from polyamine reactant
- 460 ....Solid polymer derived from -N=C=X reactant and polyhydroxy reactant derived from polyhydroxy reactant containing an ether group
- 461 ..Solid polymer derived from O-C(=O)-O- or hal-C(=O)-containing reactant
- 462 ...Solid polymer derived from O-C(=O)-O- or hal-C(=O)-containing reactant and polyhydroxy reactant

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| 463 | ....Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom  | 473 | ...Solid polymer derived from aldehyde or aldehyde-type reactant containing atoms other than C, H, or O and wherein when hexamethylenetetramine or derivative is a reactant, there is additionally present a reactant containing atoms other than C, H, or O |
| 464 | ....Mixed with silicon-containing reactant or polymer derived therefrom   | 474 | ..Solid polymer derived from silicon-containing reactant   |
| 465 | ....Mixed with aldehyde or aldehyde derivative reactant or reaction product therefrom   | 475 | ...Mixed with aluminum- or heavy metal-containing reactant or polymer therefrom  |
| 466 | ....Mixed with polycarboxylic acid or derivative and polyhydroxy reactants or polymer thereof; or di- or higher ester of polycarboxylic acid as sole reactant or polymer therefrom  | 476 | ...Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom  |
| 467 | ....Mixed with nitrogen-containing reactant or polymer therefrom  | 477 | ...Mixed with silicon-containing reactant or polymer therefrom   |
| 468 | ....Mixed with ethylenically unsaturated reactant or polymer therefrom  | 478 | ....Wherein one of said silicon materials contains Si-H bond   |
| 469 | ....Solid polymer derived from O-C(=O)-O- or hal-C(=O)- and polyhydroxy reactant derived from at least two polyhydroxy reactants  | 479 | ...Mixed with ethylenically unsaturated reactant or polymer derived therefrom  |
| 470 | ....Solid polymer derived from O-C(=O)-O- or hal-C(=O)- reactant and polyhydroxy reactant contains an atom other than C, H, O, or halogen bonded to a C(=O) group   | 480 | ..Solid polymer or specified intermediate condensation product derived from at least one phenolic reactant and at least one aldehyde or aldehyde-type reactant or polymer therefrom  |
| 471 | ..Solid polymer derived from ketone reactant and wherein none of the reactants forming the solid polymer contains an aldehyde group or is an aldehyde-type reactant or polymer derived therefrom  | 481 | ...Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom  |
| 472 | ..Solid polymer derived from aldehyde or aldehyde-type reactant and wherein none of the reactants forming the solid polymer contains a phenol-, amine-, -N=C=X, -N-S(=O)- or ketone group or a condensate thereof except when an amine group appears in hexamethylenetetramine or a derivative thereof (X is chalcogen) | 482 | ....Phenolic-aldehyde or phenolic-aldehyde-type reaction product modified with 1,2-monoepoxide prior to mixing with reactant containing more than one 1,2 epoxy group per mole or polymer derived therefrom  |
|     |   | 483 | ....Contains sulfur-containing reactant or polymer therefrom   |
|     |   | 484 | ....Contains nitrogen reactant or polymer therefrom  |
|     |   | 485 | ....With specified material  |
|     |   | 486 | ....Specified material contains nitrogen   |
|     |   | 487 | ....With silicon-containing reactant or polymer derived therefrom  |

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|-----|---|-------|--|
| 488 | ....With carboxylic acid or derivative reactant or polymer derived therefrom  | 501   | ....Additional phenol-aldehyde- or -aldehyde-type polymer, condensation product or reactants therefrom   |
| 489 | ....With additional aldehyde or aldehyde-type reactant or polymer therefrom which is distinct from aldehyde or aldehyde-type reactant used in forming solid polymer or SICP; or with nitrogen-containing reactant | 501.5 | ...Mixed with reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or a fatty acid derived from tall oil; or the reaction product of any of the above with a polycarboxylic acid or ester forming derivative and a polyhydroxy compound |
| 490 | ....Wherein phenolic-aldehyde or phenolic-aldehyde-type solid polymer or SICP contains nitrogen or ethylenic unsaturation   | 502   | ...Mixed with unsaturated reactant or polymer derived therefrom  |
| 491 | ...Mixed with additional aldehyde or aldehyde-type reactants which are part of a SPFI system or polymer thereof   | 503   | ...Mixed with aldehyde or aldehyde-type chemical treating agent  |
| 492 | ....Additional material is a hydrocarbon-aldehyde- or hydrocarbon-aldehyde-type polymer, condensate, or reactants therefrom   | 504   | ...Mixed with nitrogen-containing chemical treating agent  |
| 493 | ....Additional material is ketone-aldehyde- or ketone-aldehyde-type polymer, condensate, or reactants thereof   | 505   | ...Mixed with sulfur-containing chemical treating agent  |
| 494 | .....Contains nitrogen-containing reactant or polymer therefrom   | 506   | ...Mixed with a boron- or polyvalent metal-containing chemical treating agent  |
| 495 | ....Additional material is amine-, N-C(=X)-, or N-S(=O)- containing reactant- aldehyde or -aldehyde derivative polymer, condensate, or reactants therefrom (X is chalcogen)                                       | 507   | ...Mixed with an 1,2-epoxy-containing chemical treating agent  |
| 496 | .....Contains 1,2-epoxy-containing reactant or polymer derived therefrom  | 508   | ...Mixed with carboxylic acid- or derivative-containing chemical treating agent  |
| 497 | .....Heterocyclic nitrogen reactant or polymer therefrom, e.g., melamine, etc.  | 509   | ..Solid polymer or SICP derived from at least one amine-, N-C(=X)- or N-S(=O) containing reactant and at least one aldehyde or aldehyde-type reactant (X is chalcogen)   |
| 498 | .....-N-C(=X)-N-containing reactant or polymer, e.g., urea, etc. (X is chalcogen)   | 510   | ...Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom  |
| 499 | .....Contains sulfur reactant or polymer therefrom  | 511   | ....With specified material  |
| 500 | ....Wherein the phenolic-aldehyde- or phenolic-aldehyde-type solid polymer or SICP is derived from a reactant or polymer containing an atom other than C, H, or O   | 512   | ....Amine-, N-C(=X)- or N-S(=O)- containing reactant (X is chalcogen) aldehyde or a -aldehyde-type condensation product or polymer thereof contains atoms other than C, H, O, N, or S  |
|     |   | 513   | ....With sulfur-containing reactant or polymer therefrom   |

514	....With carboxylic acid or derivative reactant or polymer derived therefrom	525	....Wherein at least one of said 1,2-epoxy reactants or polymer derived therefrom contains atoms other than C, H, or O
515	...Mixed with additional aldehyde or aldehyde-type solid polymer; or SICP; or aldehyde or aldehyde-type reactant	526	.....Contains nitrogen atom
516	....Contains a phenolic reactant or polymer thereof	527	.....Contains halogen atom
517	....Amine-, N-C(=X)- or N-S(=O)-containing reactant-aldehyde or -aldehyde-type polymer or condensation product contains atoms other than C, H, O, N, or S (X is chalcogen)	528	...Mixed with -N=C=X-containing reactant or polymer therefrom
517.5	...Mixed with a reactant which is a fatty acid glycerol ester, a fatty acid or salt derived from a naturally occurring glyceride, tall oil, or a fatty acid derived from tall oil; or the reaction product of any of the above with a polycarboxylic acid or ester forming derivative and a polyhydroxy compound	529	...Mixed with unsaturated reactant or polymer derived therefrom
518	...Mixed with unsaturated reactant or polymer derived therefrom	530	....Wherein unsaturated reactant is a carboxylic acid or derivative or polymer derived therefrom
519	...Mixed with carboxylic acid or derivative reactant or polymer therefrom	531	.....Wherein unsaturated reactant contains only one free carboxyl group
520	....Contains -N=C=X reactant or polymer therefrom (X is chalcogen)	532	.....Contains polyol reactant or polymer derived therefrom
521	..Solid polymer or SICP derived from at least one ketone reactant and at least one aldehyde or aldehyde derivative reactant	533	...Mixed with carboxylic acid or derivative reactant or polymer therefrom
522	...Mixed with reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom	534	..Solid polymer derived from phenolic reactant
523	..Solid polymer contains more than one 1,2-epoxy group or is derived from reactant containing at least one 1,2-epoxy group	535	..Solid polymer derived from sulfur-containing reactant
524	...Mixed with a reactant containing more than one 1,2-epoxy group per mole or polymer derived therefrom	536	...Solid polymer derived from sulfur dioxide and ethylenically unsaturated reactant
		537	...Solid polymer derived from alkali metal sulfide and halogenated aromatic reactant, e.g., polyarylene sulfide, etc.
		538	..Solid polymer derived from phosphorus-containing reactant
		539	..Solid polymer derived from at least one unsaturated reactant and at least one saturated reactant
		540	..Solid polymer derived from nitrogen-containing reactant
<b><u>CROSS-REFERENCE ART COLLECTIONS</u></b>			
	901	<b>RADIAL BLOCK</b>	
	902	<b>CORE-SHELL</b>	
	903	<b>INTERPENETRATING NETWORK</b>	

- 904 ACTIVATION OF PREFORMED POLYMER  
IN ABSENCE OR MONOMER, FOR  
SUBSEQUENT POLYMERIZATION  
THEREON (E.G., TRAPPED  
RADICALS)
- 905 POLYPHENYLENE OXIDE
- 906 POLYSULFONE
- 907 POLYCARBODIIMIDE
- 908 POLYMER CONTAINING A HYDANTOIN  
GROUP
- 909 POLYMER HAVING A HETEROCYCLIC  
RING WITH AT LEAST THREE  
DIFFERENT ELEMENTS WITHIN THE  
RING
- 910 POLYMER FROM ETHYLENIC MONOMERS  
ONLY, HAVING TERMINAL  
UNSATURATION
- 911 POLYMER FROM ETHYLENIC MONOMERS  
ONLY, HAVING TERMINAL  
FUNCTIONAL GROUP OTHER THAN  
UNSATURATION
- 912 POLYMER FROM NONETHYLENIC  
MONOMERS ONLY, HAVING PENDANT  
UNSATURATED GROUP
- 913 POLYMER FROM MONOMERS ONLY HAVING  
PENDANT GLYCIDYL GROUP
- 914 POLYMER FROM CONJUGATED DIENE  
HYDROCARBON OR  
HALOHYDROCARBONS HAVING MORE  
THAN 50 PER CENT 1,2-  
MICROSTRUCTURE
- 915 POLYMER FROM MONOETHYLENIC CYCLIC  
HYDROCARBON
- 916 POLYMER FROM ETHYLENIC MONOMERS  
ONLY, HAVING CATIONIC GROUP
- 917 POLYMER FROM AT LEAST ONE  
NONETHYLENIC MONOMER HAVING  
CATIONIC GROUP
- 918 POLYMER PREPARED BY CATIONIC  
POLYMERIZATION
- 919 IONOMER RESINS (CARBOXYLATE SALT-  
CONTAINING COPOLYMERS)
- 920 POLYURETHANE HAVING TERMINAL  
ETHYLENIC UNSATURATION
- 921 POLYESTER HAVING TERMINAL  
ETHYLENIC UNSATURATION OTHER  
THAN POLYESTERURETHANES
- 922 POLYEPOXIDE POLYMER HAVING BEEN  
REACTED TO YIELD TERMINAL  
ETHYLENIC UNSATURATION
- 923 AMINOPLAST HAVING TERMINAL  
ETHYLENIC UNSATURATION
- 924 PHENOPLAST HAVING TERMINAL  
ETHYLENIC UNSATURATION
- 925 POLYMER FROM AT LEAST ONE  
NONETHYLENIC MONOMER HAVING  
TERMINAL ETHYLENIC  
UNSATURATION OTHER THAN  
POLYURETHANES, POLYESTERS,  
POLYEPOXIDES, AMINOPLASTS, AND  
PHENOPLASTS
- 926 POLYAMIDE CONTAINING A PLURALITY  
OF OXYALKYLENE GROUPS
- 927 POLYAMIDE ADMIXED WITH  
OXYALKYLENE-CONTAINING POLYMER
- 928 POLYIMIDE OR POLYAMIDE-ACID  
FORMED BY CONDENSATION OF A  
POLYAMINE WITH A  
POLYCARBOXYLIC ACID HAVING AT  
LEAST THREE CARBOXYL GROUPS OR  
DERIVATIVES THEREOF
- 929 POLYIMIDE FORMED BY ADDITION OF  
POLYAMINE TO AN UNSATURATED  
BIS-IMIDE
- 930 REACTION PRODUCT OF A POLYHYDRIC  
PHENOL AND EPICHLOROHYDRIN OR  
DIEPOXIDE, HAVING A MOLECULAR  
WEIGHT OF OVER 5,000 (E.G.,  
PHENOXY RESINS)
- 931 BLEND OF STATED INCOMPATIBILITY
- 932 BLEND OF MATCHED OPTICAL  
PROPERTIES
- 933 BLEND OF LIMITED GAS PERMEABILITY
- 934 POWDERED COATING COMPOSITION
- 935 MATRIX ADMIXED WITH SYNTHETIC  
FIBER
- 936 ENCAPSULATED CHEMICAL AGENT
- 937 UTILITY AS BODY CONTACT (IMPLANT,  
CONTACT LENS, I.U.D., ETC.)
- 938 POLYMER DEGRADATION
- 939 MULTIPACKAGE SYSTEM
- 940 HYDROGENATION OF A POLYMER
- 941 POLYMER MIXTURE CONTAINING BLOCK  
COPOLYMER IS MIXED OR REACTED  
WITH CHEMICAL TREATING AGENT
- 942 POLYMER DERIVED FROM NITRILE,  
CONJUGATED DIENE AND AROMATIC  
CO-MONOMERS
- FOREIGN ART COLLECTIONS
- FOR 000 CLASS-RELATED FOREIGN DOCUMENTS